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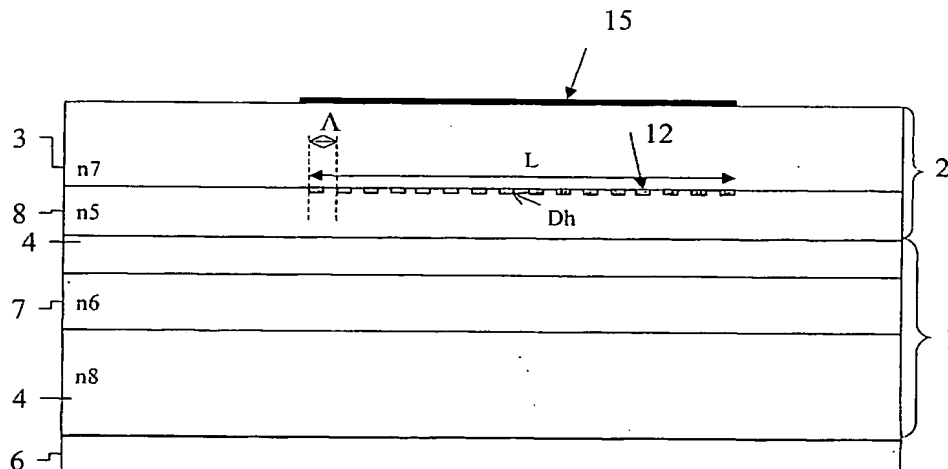
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(54) Title: TUNEABLE GRATING ASSISTED DIRECTIONAL OPTICAL COUPLER



(57) Abstract: A tuneable grating assisted directional optical coupler (10) to couple a transmission signal, comprises a first waveguide (1) including a first core (7) and a first cladding (4), the first waveguide having a first effective refractive index (n_1). The coupler (10) also comprises a second waveguide (2) including a second core (8) and a second cladding (3), the second waveguide having a second effective refractive index (n_2), different from the first effective index (n_1), and being in substantially close proximity to the first waveguide (1) in a predetermined region (L) to provide coupling there between. A periodic perturbation (12) is positioned in the coupling region (L) for causing the coupling to be wavelength selective for one given wavelength (λ) as a function of the first (n_1) and/or the second (n_2) effective refractive index. Additionally, the second cladding (3) of the second waveguide (2) comprises a tuneable material and the first cladding (4) of the first waveguide (1) comprise a non-tuneable material.



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